

Claims:

1. A knee protection apparatus for an occupant of a vehicle, comprising:
an airbag (11) disposed in front of a knee of the occupant;
an inflator (12) for supplying gas to the airbag upon collision of the vehicle so that the airbag is deployed by the supplied gas; and
an airbag support (15) that expands upon deployment of the airbag so as to cover an instrument panel (24) of the vehicle.
2. A knee protection apparatus according to claim 1, wherein the airbag support is attached to the airbag.
3. A knee protection apparatus according to claim 2, wherein the airbag support includes a temporarily attached portion (15b) that is detached from the airbag upon deployment of the airbag.
4. A knee protection apparatus according to claim 2, wherein the airbag support includes an instrument panel side portion (15A) provided to one side of the airbag that is closer to the instrument panel and an occupant side portion (15B) provided to the other side of the airbag that is closer to the occupant.
5. A knee protection apparatus according to claim 4, wherein the airbag support includes a cut-off portion (15c) at which the airbag support is split upon deployment of the airbag.
6. A knee protection apparatus according to claim 4, wherein the instrument panel side portion and the occupant side portion of the airbag support are temporarily attached to each other, so that they are detached upon deployment of the airbag.
7. A knee protection apparatus according to claim 4, wherein the instrument panel side portion and the occupant side portion are arranged such that the instrument side portion expands before the occupant side portion upon deployment of the airbag.
8. A knee protection apparatus according to any one of claims 1 to 7, wherein the airbag support is provided with an expansion guide for guiding the airbag support to stably

expand in a predetermined expanding direction.

9. A knee protection apparatus according to claim 8, wherein the expansion guide is a guide stitch (17b) sewing the airbag support and the airbag together, at least one portion of the guide stitch extending along the predetermined expanding direction.

10. A knee protection apparatus according to claim 9, wherein the guide stitch is formed by a portion of a stitch (11b) made to form the airbag.

11. A knee protection apparatus according to claim 9, further comprising a tether (11a), wherein the guide stitch is formed by a portion of a stitch sewing the tether to the airbag.

12. A knee protection apparatus according to claim 8, wherein the expansion guide is formed by a reinforcement (C) provided in the airbag support, at least one portion of the reinforcement extending along the predetermined expanding direction.

13. A knee protection apparatus according to claim 12, wherein the reinforcement is formed by a portion of the airbag support that is sewn into a specific form or at which a stitch is made.

14. A knee protection apparatus according to claim 12, wherein the reinforcement is formed by a portion of the airbag support on which sealing substance is applied.

15. A knee protection apparatus according to claim 1, further comprising an airbag case (13), in which the airbag is stored wrapped, and an airbag cover (14) for covering an opening of the airbag case, wherein the airbag support and the airbag cover are integrally formed.

16. A knee protection apparatus according to claim 2, wherein the airbag support and the airbag are integrally formed of a common base cloth.

17. A knee protection apparatus according to claim 2, wherein the airbag support and the airbag are separately wrapped and stored.

18. A knee protection apparatus according to claim 2, one end portion of the airbag support being a bottom portion and the other end portion of the airbag support being a top portion, wherein the airbag support is attached at the bottom portion to the airbag, and the airbag support and the airbag are stored with the top portion being separately wrapped from the airbag.

19. A knee protection apparatus according to claim 2, further comprising an airbag case (13) for storing the airbag wrapped, wherein the airbag and the airbag support are wrapped separately and stored in the airbag case in such a way that the airbag support covers the airbag in the same airbag case.

20. A knee protection apparatus according to claim 4, further including an airbag case (13) for storing the airbag, wherein the instrument side portion and the occupant side portion of the airbag support are wrapped separately and stored within the airbag case together with the airbag in such a way that the airbag wrapped is covered by the occupant side portion and the occupant side portion is covered by the instrument panel side portion.

21. A knee protection apparatus according to claim 1, wherein one end portion of the airbag support is free and an anchor portion is provided at the same end portion.

22. A knee protection apparatus according to claim 21, wherein the anchor portion is formed by a portion of the airbag support on which sealing substance is applied.

23. A knee protection apparatus according to claim 21, wherein the anchor portion is formed by a portion of the airbag support that is sewn into a specific form or at which a stitch is made.

24. A knee protection apparatus according to claim 1, wherein the airbag support is provided with a friction reducer for reducing friction between the airbag support and the airbag.

25. A knee protection apparatus according to claim 24, wherein the friction reducer is formed by a layer of sealing substance created on one side of the airbag support closer to the airbag.

26. A knee protection apparatus according to claim 24, wherein the friction reducer is formed by overlapped portions of the airbag support.

27. A knee protection apparatus according to claim 24, wherein the friction reducer is formed through an arrangement of the airbag support and the airbag where a weave direction of base cloth of the airbag and a weave direction of base cloth of the airbag support are different.

28. A knee protection apparatus according to claim 2, one end portion of the airbag support being a bottom portion and the other end portion being a top portion, wherein the airbag support is attached at the bottom portion to the airbag while the top portion is free, and a peripheral length of a top side of the airbag support is longer than a peripheral length of a bottom side of the airbag support.